



# RISC-V<sup>®</sup>



# RISE

RISC-V & RISE Project BoF  
April, 2024 - EOSS Seattle

# What is RISC-V? One name to mean many things

- Open Instruction Set Architecture (ISA) - an open standard
  - Published first by UC Berkeley under Creative Commons
  - Now curated under RISC-V International - **riscv.org**
  - Developed by a global community of thousands of developers
- Open and proprietary cores - expressions of the ISA
- Software ecosystem supporting RISC-V cores
- Business ecosystem developing and promoting RISC-V
- Extensive community surrounding the RISC-V architecture
- Other communities supporting the RISC-V ecosystem



# RISC-V Hardware Ecosystem

- Open source ecosystem



**OPENHW**<sup>GROUP</sup>  
— PROVEN PROCESSOR IP —



**beagleboard.org**



- Commercial hardware ecosystem

- MANY hardware providers including SiFive, Andes, Qualcomm, Nvidia, Intel, Microchip, Alibaba, Ventana Micro, RIVOS, Western Digital, Seagate, AMD, MIPS, Imagination, NXP, milkV, StarFive, semiFive, Sophgo, Samsung, Marvell, Renesas, Tenstorrent
- MANY services providers including Codaip, BayLibre, Antmicro, Syntacore, Bluespec, Codethink, Embecosm, Verisilicon
- MANY systems integrators including Thales, ST, Sony, Schneider, Siemens

- Academic & Labs ecosystem

- MANY including



**ISCAS**



**ETH** zürich



# RISC-V Software Ecosystem

- Operating systems & firmware
- Development tools
- Language runtimes
- Hypervisors & virtualization
- Hardware emulation (eg. QEMU)
- Hardware simulation
- Libraries
- Databases



- RISE Project supports technically & financially

# RISE Project



- Collaboration among corporate stakeholders to support and augment the RISC-V software ecosystem
- Thirteen original members, now 20+ member organizations
- Provides engineering support as well as financial via RFP process
- Nine working groups under TSC
  - Compilers and Toolchains WG
  - Debug and Profiling WG
  - Developer Infrastructure WG
  - Distro Integration WG
  - Firmware WG
  - Kernel and Virtualization WG
  - Language Runtimes WG
  - Simulator Emulator WG
  - System Libraries WG
- Formed in May, 2023
- Organized under Linux Foundation Europe
- Visit at **[riseproject.dev](https://riseproject.dev)** - technical status at **[wiki.riseproject.dev](https://wiki.riseproject.dev)**

Thank You!

